English

Swann™

Bolt HD

M690CAM08091 IE

(Important) Legal Mumbo Jumbo

- **FCC Verification:**
  NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna
  - Increase the separation between the equipment and the receiver
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
  - Consult the dealer or an experienced radio/TV technician for help

- **IMPORTANT NOTE: Prohibition against eavesdropping**
  Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

- **WARNING:** Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

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Introduction

You've gone and done it now. Really taken the cake. You've bought a ***Bolt HD*** *1080p Waterproof SportsCam* - the **miniature**, **waterproof**, **easy** to use, **full HD** personal action video recorder from *Swann*. Kudos to you! Can't say we're not envious.

You've nabbed yourself a camera that's perfect for capturing your **insane antics** and **displays of immense skill***.

It's great for recording **biking**, **skating**, **skiing** or **snowboarding**, **surfing** or **throwing yourself out of a perfectly good aircraft**. Or just about anything else you can think of!

Strap it to your **head**, **arms**, **legs**, **butt**, **bike**, **board**, **gear**, **rigging** or **shoes**. Or you can **think outside the box**.

Use it to **capture** video to **show** your friends and **share** your videos online.

Don't **talk big**. **Show big**. **Prove** you did it with the ***SportsCam***.

* The camera isn't going to make you any more skilled. Sorry.
It ain't magic, just miniaturized technology. You'll have to provide the skill!

Where Stuff is At (The Layout)

The Frontside

Power / Record Button
*Heck, we might as well call it "**the** button" - it is all on its lonesome.*

Rear Cap

Targeting Laser
Lasers make everything cooler.

Lens
A bit of high-quality glass used to focus stuff.

Indicator LED
The SportsCam *can't talk, so it flashes a little light to let you know what it's up to, like Captain Pike from that old episode of* Star Trek.

The Backside

USB Port
For charging, computers and composite video output.

Reset
Sets everything back to the factory defaults.

1080p / 720p Switch
Choose between 720p (nice) and 1080p (seriously nice).

microSD Card Slot
*For inserting a microSD card and **nothing else.***

Mini-HDMI Port
Pure awesomeness in one output.

Infrared Sensor (for Remote)
We tried a brainwave sensor here, but it turns out they still only work in science fiction. So, the IR sensor works like the one in your TV. You'll need the rear cap off to use the remote.

Getting Started

Right. So: you've got the *SportsCam*. It's Friday afternoon, and you're headed out skating on Saturday morning and you want to get the *SportsCam* setup and ready to rock and/or roll.

1. Charge the battery.

Short version: Plug the little end of the USB cable into the SportsCam, and the big end into the included power adapter. Plug the power adapter into a wall socket. Wait two to three hours. Bam!

Check out page 9 for the long version on getting yourself some power.

2. Jam a microSD card in it. Gently.

Short version: Ensure there's nothing on the microSD card you want to keep, as we'll be formatting it in a moment (that erases all the data and preps it for recording video). The *SportsCam* shoots high-def video, so grab yourself a decently big card - we reckon that 8GB is a realistic minimum, with 16GB or 32GB cards recommended.

Check out page 8 for the long version regarding microSD cards.

3. Set up your Camera using the On-Screen Menus

Short version: Connect the *SportsCam* to a television or monitor using either the mini-HDMI output or the COMPOSITE VIDEO output (that's the weird USB to RCA cable - one end goes into the USB port on the *SportsCam* and the other to the VIDEO IN on a TV). Use the **Remote Control** to access the menus see ("The Remote Control" on page 15).

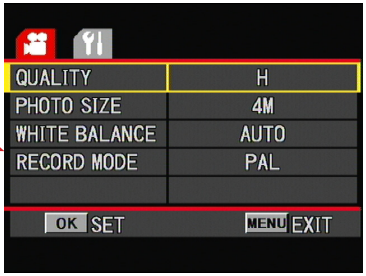
We think the best course of action is to:

- **Choose** your recording format (PAL or NTSC).
- **Format** your microSD card.
- **Set** the Date and Time.
- **Choose** your Resolution (see page 11).
- **Choose** your Quality settings (check out page 18).

A few things you really have to get right:

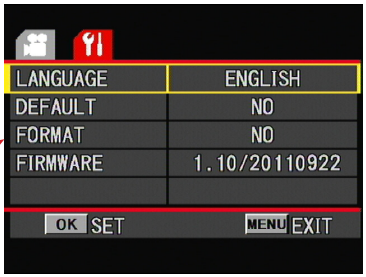
PAL or NTSC

The **Record Mode** setting *must* be set correctly for your location if you want the highest quality playback possible. This setting is doubly important if you're planning to shoot under or around fluorescent lights - if this is wrong, then they'll 'flicker'.



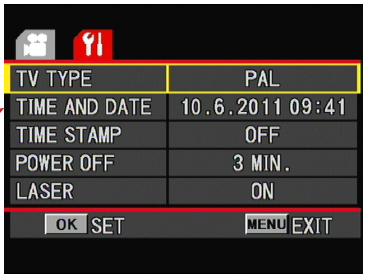
*Choose **NTSC** if you're in the **USA, Canada, Mexico, Korea** or **Japan.***

*Choose **PAL** if you're in the **UK, Europe, Africa,** or **Australia.***



Format

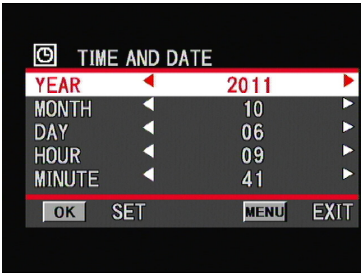
To clean old data off the microSD card and get it ready to record video, we suggest formatting it in the *SportsCam*.



Date and Time

*The time is represented in standard US format: **MM/DD/YYYY***

We suggest getting this right before you head out the first time. Unless you do a complete reset of the unit or *completely* drain the battery (it will automatically shut down before this happens) you shouldn't have to set it again.



Your microSD Card and You

Choosing a microSD card:

The *SportsCam* will accept a microSD card **up to 32GB** in capacity.

You can store between 7 ~ 30 minutes worth of video per gigabyte (GB). Check out page 18 for more information on recording times versus quality settings.

We recommend using cards of at least 8GB to ensure that the *SportsCam* won't run out of storage space whilst you're filming, 16GB or 32GB are recommended for recording in 1080p at high quality.

Of course, if you only want to record ten minutes at a time, you could get away with a much smaller card. But remember, when it runs out - that'll be all she wrote!

For reliable performance, we strongly suggest that you use a card with a speed rating of "Class 4" or higher.

Look for these symbols:

Inserting a microSD card:

- Hold the *SportsCam* so that the rear panel is facing you, and the power/record button is facing up.
- Orient the microSD card so that the text is facing up.
- Gently push the microSD card into the slot. Be careful that it goes in correctly - if it misses the slot or is inserted at an angle, it could become jammed.
- The card will "click" into place once fully inserted.
- To remove the card, simply push it in. This will release the locking mechanism, and the card will spring out. Be careful when removing the microSD card - the little spring that pushes it out is quite powerful.

You Got the Power: Charging the Battery

The *SportsCam* charges via the mini USB socket on the rear panel.

- Insert the mini-USB plug on the USB adapter or USB cable into the USB socket on the rear of the *SportsCam*.
- Connect one end of the USB adapter or cable to the USB port on the included power adapter.

Under no circumstances ever connect the *SportsCam* to any power source supplying anything other than 5V. It's safe to connect it to a USB port on a computer (see below!) and the included power adapter.

Computers don't cut it!

The current supplied by most computer's USB ports (*5V 500mA*) is not sufficient to properly charge the *SportsCam*. The *SportsCam's* battery is small, but powerful, and it needs more juice to charge. The supplied adapter (*5V 1000mA*) is perfect for the job, and you'll get much better results using that.

Charging Status Indicator LEDs
(a.k.a. "Them there glowin' things!")

While the *SportsCam* is charging, the red LED on the rear panel will light up. It will go out when the *SportsCam* is fully charged.

The green LED will light up whenever the *SportsCam* is connected to power.

As the green and red LEDs are located very close to one another, you might need to tilt the *SportsCam* slightly relative to your eye to see what both of them are doing!

The LEDs are here... right here.

The *SportsCam* takes 2 hours to charge using the included USB charger. *It will take much longer from a USB port, if it charges at all.*

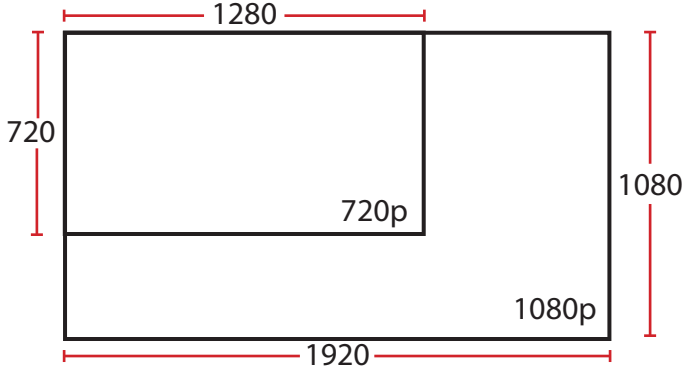
The Button: a.k.a. "Operating Guide"

Button, button, who's got the button? **Oh, it's where we left it, right in the middle on the top. Pretty obvious, really.**

Things that Pressing **The Button** will do	
Turning the Camera on and Recording Video	While the camera is off, charged and disconnected from any USB or HDMI connection (PC, composite video, HDMI or charger) press and hold the button down for approximately 2 ~ 3 seconds. The camera will beep three times. The LED on the front of the camera will light up for a moment, and will flash red while recording video. The targeting laser will come on for a few seconds unless disabled, then automatically go out.
Engage the Targeting Laser	While the camera is on, press the button and hold for a quarter of a second and then release. The targeting laser will come on for a few seconds and then automatically switch off.
Stop Recording and Shutdown Camera	While the camera is recording, press and hold the button for about three seconds. The camera will beep twice, and the green LED will light up for a moment.
Booting the Camera into HDMI, USB or Composite Video Modes	When the *SportsCam* is turned OFF, insert the cable associated with your desired outcome (USB cable for a computer, USB-to-RCA cable for Composite Video or the HDMI cable for HDMI). Connect the other end of the cable to the desired device (computer, monitor or TV, as applicable). Press and hold the button for three seconds to turn the camera on. The *SportsCam* will automatically boot into the appropriate mode for the cable connected.

Resolution: Choosing It

The *SportsCam* can record at two different resolutions: 720p (*1280 x 720*) and 1080p (*1920 x 1080*). To select your resolution, use the switch on the rear panel of the camera.



Why would you want to record at a lower resolution?

Believe it or not, there are actually a few really good reasons to record at 720p. Here are a couple, presented in reverse order of pretentiousness:

- It's very, *very* slightly more retro, and (ergo) cooler. *(Hipsters only.)*
- **Not everyone can playback 1080p** - many TV's (even some marked "HD" can't playback 1080p - most systems that can will claim "*Full HD*" or "*1080p*" somewhere on the unit or the packaging (most likely both).
- If your TV supports 1080i but **not** 1080p (again, this will be written on it somewhere), then playback of 720p may actually have a slightly higher vertical resolution (720 lines versus 540) when displaying rapid motion.
- **720p is often less prone to *artefacting*** when recording rapid motion than 1080p.
- **720p uses less space than 1080p** - so, if you're trying to get the most possible out of your memory card, then it's a good option. 1080p requires approximately 8000 ~ 13000kbps, whereas 720p uses 4000 ~ 8000kbps (it varies by your **Quality** setting). You'll get about 40 minutes of 1080p to the same space as 1 hour of 720p.

Seeing how cool you are (Playback)

There are two ways to playback videos from the *SportsCam*, depending on your needs and access to equipment. The options are:

Playback via a Computer

Provided your computer meets the minimum specs to playback the *SportsCam's* videos (most modern computers will).

Playback via the mini-HDMI Port

The mini-HDMI port on the camera is great connecting to a high definition television or monitor with HDMI inputs.

Playback via the Composite Video Out

The included USB to RCA cable can be used to connect the SportsCam to an old-school television with RCA inputs. These are often labeled as *Video In*, *Composite In*, *AV*, or similar.

The composite video out puts out a standard definition signal (480 lines for NTSC, 576 lines for PAL) - so, there is a noticable drop in quality. Also, due to the analog nature of the technology, there's the chance of some noise or distortion. However, it's a great way to quickly review footage when you don't have your full HD hundred-and-fifty inch plasma panel handy.

File Type Information

Container:	MOV
Compression:	MPEG-4 AVC (Advanced Video Codec)
Bitrate:	4000kbps (720p, low) to 12000kbps (1080p high)
Audio Bitrate:	128kbps
Audio Channels:	2 (stereo)
Sample Rate:	48KHz

Playback on a Computer

You can transfer data from the microSD card onto a computer for the highest quality playback possible.

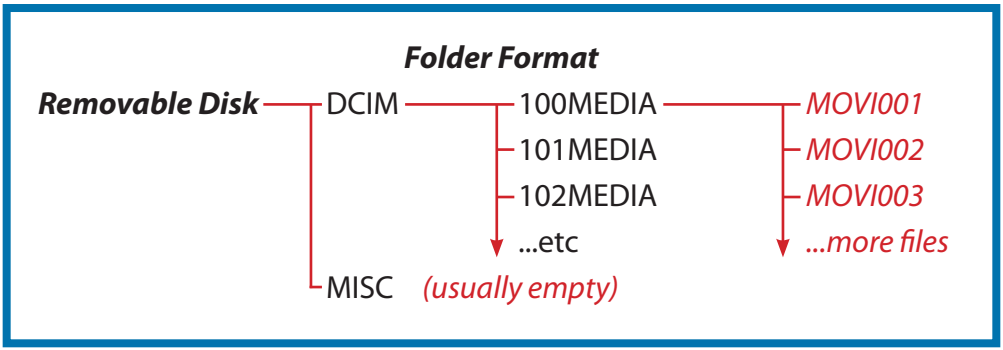
There are two options for downloading data to a computer:

USB Cable

- Turn the *SportsCam* off.
- Connect the *SportsCam* to your computer using the USB cable.
- Press and hold the button for three seconds. The *SportsCam* will start up in USB storage mode.
- The microSD card's contents will be detected by the computer, and will be accessible in the same way as a USB flash drive.
- **Remember:** the *SportsCam* will not charge while connected to a computer - it needs more juice!

Removing the microSD card

- Remove the rear cap of the *SportsCam*. Push the microSD card in to remove it. Be careful - the spring that pushes it out is pretty powerful.
- Use a USB card reader connected to your computer to access the files on the card. You may need an SD to microSD card converter, if your card reader doesn't support the microSD format.



HDMI & Composite Video Playback

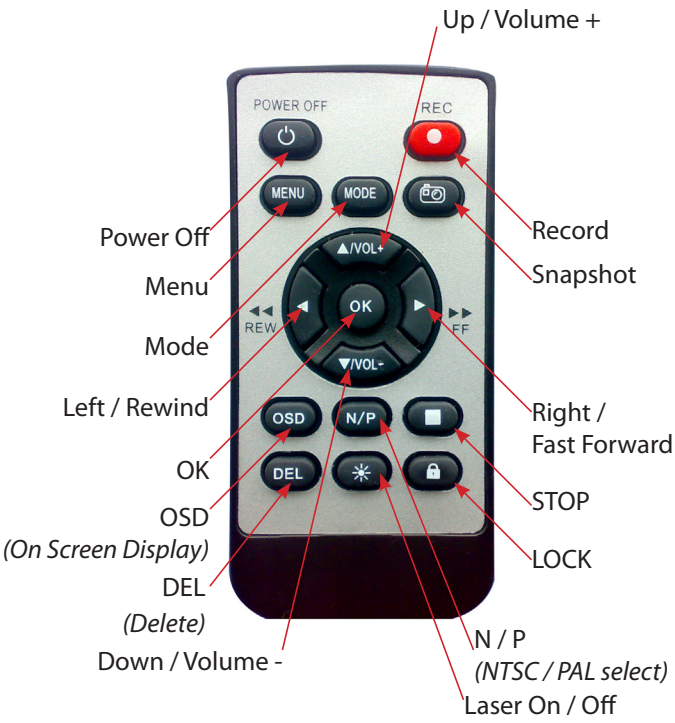
You'll need A HD-TV or high resolution monitor with HDMI IN and a mini-HDMI to HDMI cable.

- Remove the rear cap from the *SportsCam*.
- Connect an HDMI cable to the mini-HDMI output on the rear panel of the *SportsCam*.
- Connect the other end of the mini-HDMI cable to an HDMI input on your television/monitor.
- Set your television/monitor to the appropriate channel.
- Turn the *SportsCam* on (press and hold the button for about three seconds).

Playback via Composite Video Out

- Remove the rear cap from the SportsCam.
- Connect the included USB to RCA cable to the mini-USB port on the rear panel of the SportsCam.
- Connect the Video Out plug (the yellow one) to a Video Input on your television, monitor or recording device (as applicable). It will most likely also be yellow.
- If you want to hear the action, connect the white (left) and red (right) plugs to your Audio Inputs. If your device is MONO, connect the white (left) one only.
- Set your television/monitor to the appropriate channel.
- Turn the *SportsCam* on (press and hold the button for about three seconds).

The Remote Control



Using the Remote Control during Playback

- Press **MENU** to open the on-screen menu.
- Press **MODE** to enter playback mode, and to switch from MOVIE to **PHOTO** playback mode.
- Use the **arrow** buttons to highlight the item you want to view, and press **OK** to initiate playback.
- Press **STOP** to end playback.

Options, Options: The Onscreen Menus

System Configuration Menu		
TV Type	*PAL*	For connecting to and displaying images on a PAL television (for Europe, Australia, etc)
	NTSC	For connecting to and displaying images on an NTSC television (USA, Canada, Japan, etc).
Time and Date	*Set Date and Time Menu*	Opens a sub-menu where you can easily set the date and time. The date is displayed as MM/DD/YYYY
Time Stamp	*Date*	The date will be displayed on recordings.
	Time	The time will be displayed on recordings.
	Date/ Time	Both the time and date will appear.
	Off	Neither the time nor date will appear.
Power Off	*3 min*	The camera will automatically turn off after three minutes of inactivity.
	5 min	As above, but after five minutes.
	Off	The *SportsCam* will stay on indefinitely until manually shut down.
Laser	*On*	The laser will automatically come on when the camera is turned on, and again when selected.
	Off	The laser will not function.
Language	*English, Chinese*	You can swap the language of the *SportsCam* between English and Chinese.
Default	*Yes, No*	Resets all options on the *SportsCam* to their factory defaults.
Format	*Yes, No*	Formats the microSD card. Be sure you really want to do it - formatting deletes **all** data on the card.
Firmware	*Version Displayed*	This is the version of the software running on the *SportsCam*. You might need to know this number if you call *Swann* tech support.

Record Setup Menu		
Menu Item	*Settings*	*Description*
Quality	*L (Low)*	The lowest data rate, approximately 4Mbps for 720p and 8Mbps for 1080p. This will maximize your recording time at the expense of quality.
	M (Medium)	A middle-ground data rate, approximately 6Mbps for 720p and 10Mbps for 1080p.
	H (High)	The best recording quality possible, approximately 8Mbps for 720p and 12Mbps for 1080p. This does require a lot of storage space.
	*See page 18 for more detail on how the **Quality** setting affects recording time.*	
Photo Size	*3M*	2048 x 1536 pixels / 1.5MB
	4M	2592 x 1728 pixels / 2.1MB
	5M	2592 x 1944 pixels / 2.6MB
	8M	3200 x 2400 pixels /3.5MB
	12M	4000 x 3000 pixels /4.8MB
White Balance	*Auto*	The color balance is automatically adjusted by the camera.
	Incandescent	For filming under artificial lights (tungsten bulbs and equivalent) and for light that appears slightly orange (approximately 3000°K)
	Sunny	For shooting in natural daylight on a clear day. For "white light" (approximately 5600°K)
	Cloudy	Suited to shooting on an overcast day, where the light appears slightly blue (approximately 6500°K)
	Fluorescent	For shooting under artificial light from fluorescent lights, which are typically slightly green (approximately 4500°K)
	Water	For filming in water.
Record Mode	*NTSC*	Records at approximately 30 frames per second, for playback on NTSC systems. (USA, Japan)
	PAL	Records at 25 frames per second, for playback on PAL systems (Australia, Europe)

Showing your Quality

How much can I store on a microSD card?

That depends on a few things. First, how big is your SD card? Secondly, what are you recording, and at what quality?

The resolution and quality is going to have a huge impact on how much you'll be able to record. Seriously - check it out:

Quality & Resolution Settings: Video			
	Low	**Medium**	**High**
720p	4007kbps (30 min per GB)	6270kbps (20 min per GB)	8334kbps (15 min per GB)
1080p	8109kbps (15 min per GB)	10284kbps (11 min per GB)	12361kbps (7 min per GB)

Photo Quality	Dimensions	Size (approx)
3M	2048 x 1536	1.5MB (600+ per GB)
4M	2592 x 1728	2.1MB (475 per GB)
5M	2592 x 1944	2.6MB (385 per GB)
8M	3200 x 2400	3.5MB (285 per GB)
12M	4000 x 3000	4.8MB (208 per GB)

What happens when you lower the Quality?

Basically, the camera tries to use less data to represent the same image. This means the *compression* needs to work harder. 720p @ LOW quality uses only half the data of 720p @ HIGH quality, and it looks about half as sharp. However, you'll be able to store twice as much to your microSD card.

It becomes more noticeable when you pause the video. Even at low quality, during real-time playback, the video still looks reasonable (and better than, say, most videos on *YouTube* or similar online video services).

Mounting the Camera

Aiming the Camera:

To figure out what the camera is looking at, we installed a **neat targeting laser**. We had to sacrifice our plans for the army of sharks with lasers on their heads to make this happen, so we hope you appreciate it.

Basically, the little red dot will show you the center of the camera's view. Additionally, it can be used as a neat tool to entertain cats.

It will automatically turn on when you start recording with the *SportsCam*, and turn off automatically after a few seconds.

If you want to turn it on again, press the button for approximately one second and release.

Adhesive Fabric Straps

There are two adhesive fabric strips included with the *SportsCam*. They have adhesive on one side and hook & loop fasteners on the other.

You can stick these to any flat, non-porous surface, and use the hook & loop fastener to attach the camera.

Some points to remember:

- Carefully clean the area where you're going to apply the strip. Ensure that it is completely free of moisture, oils, dust or any other contaminants. Cleaning alcohol or similar is recommended.
- Carefully align the mounting strip. Once it's stuck in place, that's it.

Bar Mount

The bar mount can be used to attach the camera to any bar or pole thin enough to fit into the mounting clasp.

This is intended for mounting the camera to the handlebars of a bicycle or motorbike, but can be used to attach the camera to anything with the right shape (that is, round).

Attaching the mount:

- Undo the screw holding the clasp shut.
- Apply the mount to the bar you'd like to attach thing to.
- Tighten the screw to secure the mount in place.
- The camera simply clips into position in the upper part of the mount. But you could figure that bit out, it's kinda simple.

Surf Board Mount

The included surf board mount can be attached to any flat surface of sufficient size - typically a surfboard, but don't let us limit you.

To apply the mount:

- Carefully clean the area where you're going to apply the mount. Ensure that it is completely free of moisture, oils, dust or any other contaminants. Cleaning alcohol or similar is recommended.
- Carefully align the mounting plate. Once it's stuck in place, that's where it will be for a long time!
- Peel one side of the included adhesive pad, and apply to the underside of the mount.
- Carefully peel the other side of the adhesive pad and apply to the surface you want to mount to. Be careful that everything lines up!

Shooting Your Troubles

Q: *It won't turn on!*
A: Try turning it on and off again. Has the camera been left on/recording for a while for a while? Is the *SportsCam* charged? If not, check out "You Got the Power: Charging the Battery" on page 9. Also, don't try to charge from a computer's USB socket, because it probably won't.

Q: *I can't play back footage on my computer.*
A: Try using a different program, such as VLC Media Player (a favorite around the Swann office).
It's available free from www.videolan.org/vlc, and works with a huge range of operating systems. You may need to drag and drop the file onto the VLC (or appropriate program) window if the default file association isn't right.

Q: *The audio sounds muffled.*
A: Are you using the waterproof cap? Unfortunately, sound doesn't travel so well through solid plastic.
That's the downside about making it waterproof - it's pretty sound-proof, too. You can use this to your advantage - in many high wind situations (anything 65mph [100km/h] or faster) it can actually make the audio quality better.
If you're not using the *SportsCam* in or around water, try using the non-waterproof cap (the one with the little holes). Sound travels better through holes (or so we've heard).

Q: *The audio sounds distorted/weird/too loud.*
A: This can often happen if you attach the *SportsCam* to a vehicle, skateboard, bicycle or anything else which vibrates when in use. Try it with and without the water-proof cap (unless you need it to be waterproof). Try using a different mounting option. Try attaching the camera to your clothing using the hook & loop patches - cloth usually muffles vibrations and might improve the audio quality. Finally, remember that in certain situations you're just not going to be able to get any decent audio - for example, when the background noise level is simply too high. It sucks but sometimes there's nothing that can be done: physics is a harsh mistress.

Technically Speaking (Specifications)

Sensor type		CMOS 2592x1944
Viewing angle		135 degrees @ 720p 110 degrees @ 1080p
Storage consumption based on 2GB micro-SD (approx)	**Snapshot 3M**	1200+ (2048 x 1536)
	Snapshot 4M	950 (2592 x 1728)
	Snapshot 5M	770 (2592 x 1944)
	Snapshot 8M	570 (3200 x 2400)
	Snapshot 12M	416 (4000 x 3000)
Storage consumption based on 2GB micro-SD	**1080p**	High: 15 min / Medium: 25 min / Low: 30 min
	720p	High: 30 min / Medium: 40 min / Low: 60 min
Recording format		.MOV MPEG-4 AVC
Video Record	**Resolution**	1080p (1920x1080) @ 25fps (PAL) / 30fps (NTSC) 720p (1280x720) @ 25fps (PAL) / 30fps (NTSC)
Photo Resolution	**Snapshot 3M**	2048 x 1536
	Snapshot 4M	2592 x 1728
	Snapshot 5M	2592 x 1944
	Snapshot 8M	3200 x 2400
	Snapshot 12M	4000 x 3000

Digital Zoom		None
AV output	**AV output**	Composite NTSC/PAL via USB to RCA cable
	HDMI	mini-HDMI
USB Interface		USB 2.0 for data transfer
Charging		Included charger (5V, 1A) or via USB 2.0 Port
Microphone		2 built in microphones (stereo)
Power Consumption		Approx. 400mA@3.7V (max.)
Lithium Battery		600mAh
Record Time		90 min
Laser power		1mW
Storage temperature		-4°F ~ 140°F / -20°C ~ 60°C
Operating temperate range		-4°F ~ 122°F / -20°C ~ 50°C
Operating humidity range		15 ~ 85%RH

Due to product improvements, specifications are subject to change without notice.

For the latest version of this manual, visit:

www.swann.com

Helpdesk / Technical Support Details

Swann Technical Support

All Countries E-mail: tech@swann.com

Telephone Helpdesk

USA toll free
1-800-627-2799
(Su, 2pm-10pm US PT)
(M-Th, 6am-10pm US PT)
(F 6am-2pm US PT)

USA Exchange & Repairs
1-800-627-2799 (Option 1)
(M-F, 9am-5pm US PT)

AUSTRALIA toll free
1300 138 324
(M 9am-5pm AUS ET)
(Tu-F 1am-5pm AUS ET)
(Sa 1am-9am AUS ET)

NEW ZEALAND toll free
0800 479 266

UK
0203 027 0979

See http://www.worldtimeserver.com for information on time zones and the current time in Melbourne, Australia compared to your local time.

Warranty Information

Swann Communications USA Inc.
12636 Clark Street
Santa Fe Springs CA 90670
USA

Swann Communications
Unit 13, 331 Ingles Street,
Port Melbourne Vic 3207

Swann Communications LTD.
Stag Gates House
63/64 The Avenue
SO171XS
United Kingdom

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from it's original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centres. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.
For Australia: Our goods come with guarantees which cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to major failure.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

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FCC Verification

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

WARNING: Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.